<u>**REMARKS**</u>

Claims 1-24 are currently pending in the subject application and are presently under consideration. Claims 1, 15, 17, 19 and 22-24 have been amended as shown on pp. 2-6 of the Reply. Claim 21 has been cancelled without prejudice or disclaimer.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

I.   <u>Objection to Drawings</u>

The typographical errors in Fig. 16 and Fig. 17 have been corrected. Accordingly, this objection should be withdrawn.

II.   <u>Objection to Claims 19 and 23</u>

The typographical errors in Claims 19 and 23 have been corrected. Accordingly, this objection should be withdrawn.

III.   <u>Rejection of Claims 1-14, 21 and 23 Under 35 U.S.C. §101</u>

Claims 1-14, 21 and 23 stand rejected under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter. This rejection should be withdrawn for at least the following reasons. The Federal Circuit has clearly established in *Eolas Techs., Inc. v. Microsoft Corp.*, 399 F.3d 1325, 1338 (Fed. Cir. 2005) and *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1358. (Fed.Cir. 1999) that inventions such as that claimed by applicant is statutory.

> This court must also decide whether software code made in the United States and exported abroad is a "component of a patented invention" under 271(f)... Section 271(f) refers to "components of a patented invention."... Title 35, section 101, explains that an invention includes "any new and useful process, machine, manufacture or composition of matter."... Without question, ***software code alone qualifies as an invention eligible for patenting under these categories***, at least as processes. *Eolas Techs., Inc. v. Microsoft Corp.*, 399 F.3d 1325, 1338 (Fed. Cir. 2005). (Emphasis added).

The Federal Circuit in *Eolas Techs., Inc. v. Microsoft Corp.* clearly established that software code alone is statutory subject matter. Independent claim 1 (and similarly recited in independent claims 23) recites a ***computer implemented executable code check system***. A system by itself is statutory subject matter. By the standards set forth in the above decision, a computer implemented system in the form of software, hardware, or the combination of both clearly falls within the categories of statutory subject matter. Independent claim 23 recites a ***computer executable system*** and by the same standard as set forth above, this claim falls within the categories of statutory matter.

Furthermore, the subject claims produce a useful, concrete, and tangible result.

> Because the claimed process [method] applies the Boolean principle to produce a useful, concrete, tangible result … on its face the claimed process comfortably falls within the scope of §101. *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1358. (Fed.Cir. 1999); *See State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1373, 47 USPQ2d 1596, 1601 (Fed.Cir.1998) (finding a system implementing a financial management structure satisfied §101 because it constituted a practical application of a mathematical algorithm by producing a useful, concrete and tangible result).

As provided above, the legal standard set forth by the Federal Circuit in *A&T Corp. v. Excel Communications, Inc* for determining whether a claim is directed towards statutory subject matter is whether a claim can be applied in a practical application to produce a useful, concrete, and tangible result. The subject claims determine a fault condition and provide information if a fault condition is determined. Providing information based on determination of a fault condition is a useful, concrete and tangible result.

In view of at least the foregoing, it is readily apparent that applicant's invention as recited in independent claims 1 and 23 (and associated dependent claims 2-14) is statutory subject matter and produces a useful, concrete, and tangible result. Accordingly, withdrawal of this rejection is respectfully requested.

Claim 21 has been cancelled. Accordingly, withdrawal of this rejection is respectfully requested.

IV.   Rejection of Claim 23 Under 35 U.S.C §112

Claim 23 stands rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This rejection should be withdrawn for at least the following reason.

Claim 23 has been amended to overcome the rejection due to insufficient antecedent basis. Thus it is respectfully requested that this rejection be withdrawn.

V.   Rejection of Claims 1, 15, 21, 22 and 23

Claims 1, 15, 21, 22 and 23 are provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 5-6, 20, 22, 24 and 25 of co-pending Application No. 10/667,542. Withdrawal of this rejection is respectfully requested in view of the Terminal Disclaimer filed herewith.

VI.   Rejection of Claims 1-6, 12, 13, 15, 16 and 19-24 Under 35 U.S.C. §102(b)

Claims 1-6, 12, 13, 15, 16 and 19-24 stand rejected under 35 U.S.C. §102(b) as being anticipated by Necula, *et al.* (US Patent 6,128,774). This rejection should be withdrawn for at least the following reasons. Necula, *et al.* does not disclose or suggest each and every aspect set forth in the subject claims.

> A single prior art reference anticipates a patent claim only if it *expressly or inherently describes each and every limitation set forth in the patent claim*. *Trintec Industries, Inc. v. Top-U.S.A. Corp.,* 295 F.3d 1292, 63 USPQ2d 1597 (Fed. Cir. 2002); *See Verdegaal Bros. v. Union Oil Co. of California,* 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The *identical invention must be shown in as complete detail as is contained in the ... claim*. *Richardson v. Suzuki Motor Co.,* 868 F.2d 1226, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989) (emphasis added).

Applicants' claimed subject matter relates to a system and method employing plug-in pre- and/or postcondition(s) facilitating static checking of object code. In particular, independent claims 1, 15, 19 and 22-23, as amended, recite similar aspects, namely *passing a user injected custom state to the plug-in condition to check a fault condition.* Necula, *et al.* does not disclose or suggest these novel aspects.

Necula, *et al.* relates to a system that verifies safe execution of software. In particular, the system, verifies that untrusted software supplied by a code producer is safe to execute by a code consumer. Specifically, the code consumer can declare a precondition, stored in the configuration data, and guarantee that the precondition holds when the untrusted code is invoked. (*See* column 7, lines 19-22). Necula, *et al.* is silent with respect to a user injected custom state that can be passed to the plug-in condition to determine a fault condition.

Applicants' claimed subject matter, in contrast, discloses a system wherein a user injected custom state is passed to a plug-in condition to determine a fault condition. In particular, the programmer/specifier can place annotation(s) in a program to be checked and interfaces invoked by the system to be checked that specify plugin-post condition(s). These post condition(s) have the effect of injecting the custom state of the programmer into the property(ies) the checker traces and propagates. When the checker analyzes a call to a method with a plugin precondition, the checker has traced the custom state (injected earlier) to this call site. The checker then invokes the plugin-precondition, which is arbitrary code written by the programmer/specifier, and passes to this plugin the custom state traced by the checker. (*See* page 3, lines 18-27). Necula, *et al.* fails to teach or suggest these novel aspects.

Furthermore Claim 24 recites a method that performs component-wise comparison of a custom state and a state defined by a parameter to determine a fault condition. Necula, *et al.* is silent with regard to a determination of a fault based on a comparison between a user injected custom state and a state defined by a parameter.

In view of at least the foregoing, it is readily apparent that Necula, *et al.* does not anticipate or suggest the subject invention as recited in claims 1, 15, 19 and 22-24 (and claims 2-6, 12, 13 and 16 that depend there from). Accordingly, it is respectfully requested that this rejection be withdrawn.

VII.   Rejection of Claims 17 and 18 Under 35 U.S.C. §102(b)

Claims 17 and 18 stand rejected under 35 U.S.C. §102(b) as being anticipated by Tichelaar ("A Meta-model for Language-Independent Refactoring"). This rejection should be withdrawn for at least the following reasons. Tichelaar does not disclose or suggest each and every aspect set forth in the subject claims.

Applicants' claimed subject matter relates to a method to statically check executable code. In particular, independent claim 17, as amended, recites a method that determines a fault condition based upon information from at least one of plug-in precondition or a plug-in postcondition. Tichelaar is silent with respect to this novel aspect.

Tichelaar relates to a language independent refactory engine that changes a system to improve its internal structure without altering its external behavior. The engine provides standard method for programmers and tools to perform refectories no matter which language they work in. However, Tichelaar fails to teach or suggest determination of a fault condition based upon information from at least one of plug-in precondition or a plug-in postcondition.

Applicants' claimed subject matter, as discussed above, discloses a system wherein a user injected custom state is passed to a plug-in condition to determine a fault condition. In view of at least the foregoing, it is readily apparent that Tichelaar does not anticipate or suggest the subject invention as recited in claim 17 (and claim that depends therefrom). Accordingly, it is respectfully requested that this rejection be withdrawn.

VIII.   Rejection of Claim 7 Under 35 U.S.C. §103(a)

Claim 7 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Necula, *et al.* (US Patent 6,128,774) in view of Meijer, *et al.* ("Technical Overview of the Common Language Runtime"). This rejection should be withdrawn for at least the following reasons. Necula, *et al.* either alone or in combination with Meijer, *et al.,* does not teach or suggest every feature of the subject claims.

> To reject claims in an application under §103, an examiner must establish a *prima facie* case of obviousness. A *prima facie* case of obviousness is established by a showing of three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *See* MPEP §706.02(j). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *See In re Vaeck,* 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (emphasis added).

Applicants' claimed subject matter relates to a system employing plug-in pre- and/or postcondition(s) to facilitate static checking of object code. In particular, independent claim 1, as amended, recite similar aspects, namely ***passing a user injected custom state to the plug-in condition to check a fault condition.*** Necula, *et al.* either alone or in combination with Meijer, *et al.* does not disclose or suggest these novel aspects.

As discussed above, Necula, *et al.* is silent with regard to determination of a fault condition by passing a user injected custom state to a plug-in condition. Meijer, *et al.* discloses a Common Language Runtime (CLR) that is expressed in the Common Intermediate Language (CIL), can be compiled from a language such as C, Pascal, C# etc. However, Meijer, *et al.* does not remedy the aforementioned deficiencies presented by Necula *et al.* with respect to the independent claim 1.

Necula, *et al.* alone or in combination with Meijer, *et al.* fail to teach or suggest all features of applicants' invention as recited in independent claims 1 (and claim 7 that depends there from), and thus fails to make obvious the subject claim. Therefore, it is respectfully requested that this rejection be withdrawn.

IX.   Rejection of Claims 8-11 Under 35 U.S.C. §103(a)

Claims 8-11 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Necula, *et al.* (US Patent 6,128,774) in view of Das, *et al.* ("ESP: Path-Sensitive Program Verification in Polynomial Time"). This rejection should be withdrawn for at least the following reasons. Necula, *et al.* alone or in combination with Das, *et al.* fails to teach or suggest each and every aspect of the claimed subject matter.

Claims 8-11 depend from independent claim 1. As discussed above, Necula, *et al.* fails to teach or suggest all features of independent claim 1. Specifically, Necula, *et al.* is silent with respect to a checker component that passing a user injected custom state to the plug-in condition to check a fault condition. Dal, *et al.* merely relates to a new algorithm for partial program verification that runs in polynomial time and space. The algorithm checks if the program satisfies a given temporal safety property. However, the algorithm does not determine a fault condition by passing a user injected custom state to a plug-in condition and thus fails to rectify the aforementioned deficiencies of Necula, *et al.* with respect to independent claim 1. Accordingly, withdrawal of this rejection is respectfully requested.

X.   Rejection of Claim 14 Under 35 U.S.C. §103(a)

Claim 14 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Necula, *et al.* (US Patent 6,128,774) in view of Goldberg, *et al.* (US Patent 6,571,232). This rejection should be withdrawn for at least the following reasons. Neither Necula, *et al.* nor Goldberg, *et al.* teach or suggest all limitations recited in the subject claims.

Claim 14 depends on independent claim 1. As discussed above, Necula, *et al.* does not teach or suggest all limitations of claim 1 and Goldberg, *et al.* is silent with regard to the aforementioned deficiencies presented by Necula, *et al.* with respect to independent claim 1. Goldberg, *et al.* merely relates to a query object generator tool that generates interface definitions and code that implement a query object also generates a database schema access query object that retrieves the schema of an underlying database and fails to make up for the deficiencies presented by Necula, *et al.* with respect to independent claim 1 discussed supra.

Based on at least the foregoing, it is respectfully requested that this rejection be withdrawn.

CONCLUSION

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [MSFTP482US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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